WHAT IS CLAIMED IS:

1. An isolated polynucleotide encoding a polypeptide comprising:

(a) the amino acid sequence set forth in SEQ ID NO: 28, or the mature protein portion thereof;

(b) the amino acid sequence set forth in SEQ ID NO: 30, or the mature protein portion thereof; or

(c) the amino acid sequence set forth in SEQ ID NO: 32, or the mature protein portion thereof.

2. The polynucleotide of claim 1 comprising the nucleotide sequence set forth in SEQ ID NO: 27 or the mature protein coding portion thereof.

3. The polynucleotide of claim 1 comprising the nucleotide sequence set forth in SEQ ID NO: 29 or the mature protein coding portion thereof.

4. The polynucleotide of claim 1 comprising the nucleotide sequence set forth in SEQ ID NO: 31 or the mature protein coding portion thereof.

5. An isolated polynucleotide comprising a fragment of the nucleotide sequence set forth in SEQ ID NO: 27 at least 15 nucleotides in length, said fragment comprising nucleotides 271 to 288 of SEQ ID NO: 27 or a portion thereof and said fragment capable of specifically identifying SEQ ID NO: 27.

6. The polynucleotide of claim 5 wherein said fragment is at least 20 nucleotides in length.

7. An isolated polynucleotide comprising a fragment of the nucleotide sequence set forth in SEQ ID NO: 29 at least 15 nucleotides in length, said fragment comprising nucleotides 271 to 279 of SEQ ID NO: 29 or a portion

thereof, and said fragment capable of specifically identifying SEQ ID NO: 29.

8. The polynucleotide of claim 7 wherein said fragment is at least 20 nucleotides in length.

9. An isolated polynucleotide comprising a fragment of the nucleotide sequence set forth in SEQ ID NO: 31 at least 15 nucleotides in length, said fragment comprising nucleotides 1440-1442 of SEQ ID NO: 31 or a portion thereof, and said fragment capable of specifically identifying SEQ ID NO: 31.

10. The polynucleotide of claim 9 wherein said fragment is at least 20 nucleotides in length.

11. A diagnostic probe comprising the polynucleotide of any one of claims 5 through 10.

12. The probe of claim 11 wherein the probe comprises a detectable label.

13. The probe of claim 36 wherein the label is selected from the group consisting of radioactive labels, enzymatic labels, chemiluminiscent labels and fluorescent labels.

14. A vector comprising the isolated polynucleotide of any one of claims 1 through 4.

15. A host cell genetically engineered to contain the polynucleotide of any one of claims 1 through 4.

16. A host cell genetically engineered to contain the polynucleotide of any one of claims 1 through 4 in operative association with a regulatory sequence that controls expression of the polynucleotide in the host cell.

17. A method of making an EGFL6 polypeptide comprising the steps of growing the host cell of claim 16 in culture medium and isolating the expressed polypeptide from the cell or the culture medium.

18. An isolated polypeptide comprising:
(a) the amino acid sequence of SEQ ID NO: 28 or
(b) the mature protein portion thereof, or
(c) a fragment of the amino acid sequence of SEQ ID NO: 38 at least 5 amino acids in length and comprising amino acids 28 to 33 of SEQ ID NO: 28.

A

19. An isolated polypeptide comprising:
(a) the amino acid sequence of SEQ ID NO: 30 or
(b) the mature protein portion thereof, or
(c) a fragment of the amino acid sequence of SEQ ID NO: 30 at least 5 amino acids in length and comprising amino acids 28 to 30 of SEQ ID NO: 30.

20. An isolated polypeptide comprising:
(a) the amino acid sequence of SEQ ID NO: 32 or
(b) the mature protein portion thereof, or
(c) a fragment of the amino acid sequence of SEQ ID NO: 32 at least 5 amino acids in length and comprising amino acid 395 of SEQ ID NO: 32.

21. A method for detecting a polynucleotide of any one of claims 1 through 4 in a sample, comprising:
a) contacting the sample with a compound that specifically binds to and

forms a complex with said polynucleotide for a period sufficient to form the complex; and

b) detecting the complex, so that if a complex is detected, said polynucleotide is detected.

22. A method for detecting a polynucleotide of any one of claims 1 through 4 in a sample, comprising:

a) contacting the sample under stringent hybridization conditions with nucleic acid primers that specifically anneal to said polynucleotide under such conditions; and

b) amplifying the annealed polynucleotides, so that if a fragment of said polynucleotide is amplified, said polynucleotide is detected.

23. The method of claim 22, wherein the polynucleotide is an RNA molecule, and the method further comprises reverse transcribing an annealed RNA molecule into a cDNA polynucleotide.

24. A method for diagnosing prostate cancer comprising the step of detecting a polynucleotide having the nucleotide sequence set forth in SEQ ID NO:23, a fragment thereof, or a nucleotide sequence having at least about 90% sequence identity to SEQ ID NO: 23 in a human sample.

25. A method for diagnosing breast cancer comprising the step of detecting a polynucleotide having the nucleotide sequence set forth in SEQ ID NO:23, a fragment thereof, or a nucleotide sequence having at least about 90% sequence identity to SEQ ID NO: 23 in a human sample.

26. A method for diagnosing colon cancer comprising the step of detecting a polynucleotide having the nucleotide sequence set forth in SEQ ID

NO:23, a fragment thereof, or a nucleotide sequence having at least about 90% sequence identity to SEQ ID NO: 23 in a human sample.

27. The method of any one of claims 24 through 26 wherein a polynucleotide having the nucleotide sequence set forth in SEQ ID NO: 23 is detected.

28. A method for diagnosing prostate cancer comprising the step of detecting an EGFL6 polypeptide comprising the mature protein portion of the amino acid sequence set forth in SEQ ID NO: 24 or an amino acid sequence having at least about 90% sequence identity to SEQ ID NO: 24 in a human sample.

29. A method for diagnosing breast cancer comprising the step of detecting an EGFL6 polypeptide comprising the mature protein portion of the amino acid sequence set forth in SEQ ID NO: 24 or an amino acid sequence having at least about 90% sequence identity to SEQ ID NO: 24 in a human sample.

30. A method for diagnosing colon cancer comprising the step of detecting an EGFL6 polypeptide comprising the mature protein portion of the amino acid sequence set forth in SEQ ID NO: 24 or an amino acid sequence having at least about 90% sequence identity to SEQ ID NO: 24 in a human sample.

31. A method of inhibiting proliferation of cells expressing an EGFL6 polypeptide or variant thereof having at least about 90% sequence identity to the amino acid sequence of SEQ ID NO: 24, comprising the step of contacting said cells with an antibody or fragment thereof that specifically binds said EGFL6 or variant thereof.

32. A method of inhibiting proliferation of cells expressing an EGFL6 polypeptide or variant thereof having at least about 90% sequence identity to the amino acid sequence of SEQ ID NO: 24, comprising the step of contacting said cells with an antisense polynucleotide that specifically binds a polynucleotide encoding said EGFL6 or variant thereof.

33. The method of claim 31 or 32 wherein said cells are present in a subject suffering from cancer.

34. The method of claim 33 wherein said cancer is selected from the group consisting of lung cancer, brain cancer, prostate cancer, breast cancer and colon cancer.

35. The method of claim 33 wherein said cancer is an adenocarcinoma.

36. A pharmaceutical composition comprising an antibody or fragment thereof that specifically binds an EGFL6 polypeptide or variant thereof having at least about 90% sequence identity to the amino acid sequence of SEQ ID NO: 24, and a pharmaceutically acceptable carrier.

37. A gene delivery vector comprising an antisense polynucleotide that specifically binds to a polynucleotide encoding an EGFL6 polypeptide or variant thereof having at least about 90% sequence identity to the amino acid sequence of SEQ ID NO: 24.

38. A method of treating cancer comprising administering a compound that inhibits the proliferation promoting activity of an EGFL6 polypeptide or a variant thereof having at least 90% sequence identity to the amino acid sequence of SEQ ID NO: 24.

A.

39. The method of claim 38 wherein said compound inhibits the proliferation promoting activity of an EGFL6 polypeptide having the mature protein portion of the amino acid sequence of SEQ ID NO: 24.

40. A method for identifying a candidate inhibitor of EGFL6-induced cell proliferation comprising the step of measuring EGFL6-induced cell proliferation in the presence of and absence of a test compound, and identifying the test compound as a candidate inhibitor of EGFL6 induced cell proliferation when proliferation is decreased in the presence of the test compound.

41. The method of claim 40 further comprising the step of identifying a test compound that binds to EGFL6.

42. A candidate inhibitor identified using the method of claim 40 or 41.

Add A6